

## Import Penetration in the U.S. Fruit and Vegetable Industry

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**Abstract:** The United States imported 16.4 percent of the fruits and vegetables consumed during 1996. The United States receives more than half of all vegetable and melon imports from Mexico, with the majority being fresh-market products and frozen products a distant second. Canada is the second leading foreign supplier, with about 15 percent of U.S. import value. Imports of fresh fruit rose from 34.7 percent of fresh domestic consumption in 1990 to 38.3 percent in 1996. Bananas accounted for over half of fresh fruit imports. Costa Rica, Ecuador, Honduras, and Colombia are the major suppliers to the U.S. market for fresh and processed fruit (excluding juice). Excluding bananas, imports rose from 11.6 percent to 14.9 percent in 1996 with Chile providing about 23 percent of imported fruit.

**Keywords:** Vegetables, fruit, imports, trade, consumption.

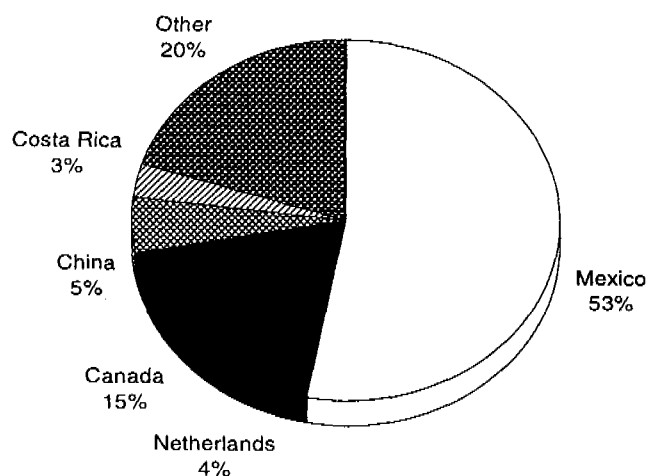
The United States imported 16.4 percent of all fruits and vegetables consumed domestically during 1996 (table A-1). As international trade agreements are reached and barriers to trade slowly come down around the globe, industries like those involved with U.S. fruits and vegetables begin to look to the world for growth opportunities. Not only do U.S. growers look to exports, but shippers and other handlers look to other countries for new products like tropical fruits and for commodities like fresh winter-season cucumbers that will fill the seasonal needs of U.S. consumers. Increasingly, imports of products like fresh tomatoes occur year-round and not just during the time that U.S. production is low. One reason for this is that importers are also looking for commodities that are lower cost, which would allow them to better compete against domestically grown product.

This article will examine the extent to which imports have penetrated U.S. fruit and vegetable markets in the 1990's. The major commodities impacted by imports will be addressed and the leading import sources for these items will be identified.

### Mexico is Top Vegetable Source

In terms of value, the United States receives more than half (53 percent) of all vegetable, melon, and pulse imports from Mexico, with the majority being fresh-market products and frozen products a distant second. Canada is the second leading foreign supplier, with about 15 percent of the U.S. import market. Because of the obvious transportation advantages, Mexico and Canada have historically been the top two suppliers. Before the embargo in 1961, Cuba was also a

Figure A-1  
Sources of U.S. Vegetables Imports, 1996



leading supplier of fresh vegetables (particularly tomatoes and cucumbers) to the United States. Rounding out the top five import sources today are China (5 percent), the Netherlands (4 percent), and Costa Rica (3 percent). China is the third leading vegetable supplier with such products as canned mushrooms, bamboo shoots, and mung beans predominating.

In terms of value, fresh vegetables and melons account for the largest share of imports with about \$1.9 billion in 1996. There is a definite seasonal pattern to fresh vegetable imports, with two-thirds of import volume arriving between December and April when U.S. production is low and limited to the southern portions of the country. The majority of these imports are tender warm-season vegetables like toma-

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toes, peppers, squash, and cucumbers. Cool-season crops like leafy green vegetables and carrots grow abundantly and cheaply in California, Arizona, and Texas during the winter months. As a result, imports of these items are very low compared with the warm season crops.

### ***Vegetable Imports on the Rise***

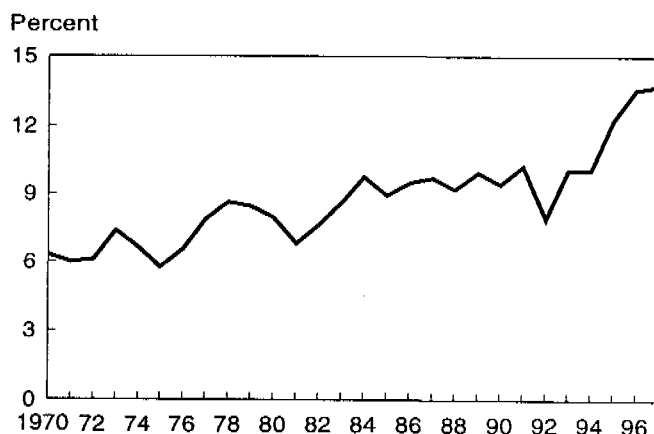
In 1996, imports accounted for 8.7 percent of total U.S. vegetable and melon consumption—up from 6.9 percent in 1990. Although imports of all aggregate categories except canned vegetables and dry beans have increased since 1990, much of the gain was due to fresh-market vegetables (table A-2). Fresh market vegetable imports have been under heavy scrutiny since the implementation of the North American Free Trade Agreement (NAFTA) in 1994. During the first year of NAFTA, the import share of consumption for fresh vegetables and melons remained steady at 10.0 percent. However, following the devaluation of the Mexican peso in December 1994, U.S. imports of Mexican vegetables rose sharply. Mexican growers increased shipments to the United States partly because of poor domestic demand and more attractive prices in the United States. Largely as a result of increased volume from Mexico, fresh vegetable import share rose to 12.2 percent during 1995 and 13.6 percent in 1996. A much smaller increase is expected for 1997 as an improved Mexican economy leads to stronger demand there.

In terms of processing vegetables, canned imports are relatively low due to a highly mechanized and relatively low-cost domestic industry. Tomato products are the leading canned item and imports of items like paste and sauce are much lower today than in 1990 due to increasing efficiency (new plants, lower costs) in the domestic industry. This has helped push back canned vegetable import penetration to 4.2 percent, down from 6.4 percent in 1990.

Frozen vegetable imports continue to increase. Imports of frozen vegetables (excluding potatoes) now account for close

Figure A-2

### **U.S. Fresh Vegetables and Melons: Import Share of Domestic Use\***



\*Excludes potatoes, sweet potatoes, and mushrooms.

to 17 percent of consumption—up from 14.1 percent in 1990. Broccoli accounts for a majority (54 percent) of the 750 million pounds of frozen vegetable imports. Most frozen broccoli comes from Mexico (with smaller amounts from Guatemala). Frozen broccoli has the highest degree of import penetration among all vegetables, with 78 percent of consumption coming from imports. Cutting broccoli into florets is a labor-intensive task. To cut costs, the industry basically moved from California to Mexico in the late 1980's and early 1990's.

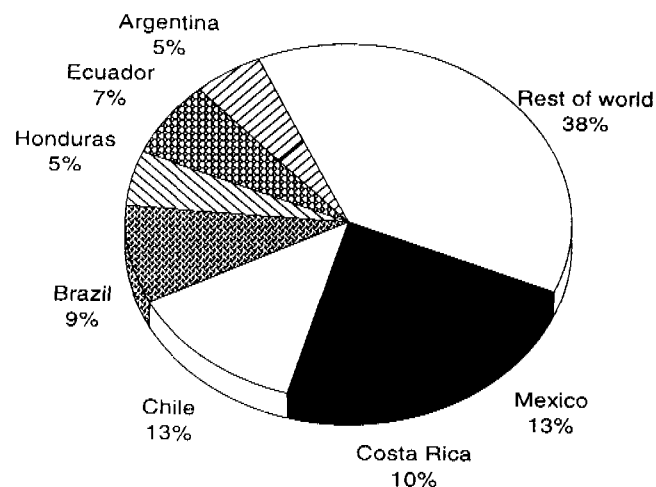
### ***Banana Exporting Countries Dominate U.S. Fruit Import Market***

Costa Rica, Ecuador, Honduras, and Colombia are the major suppliers of bananas to the U.S. market and together are the major sources of fruit imports (excluding juice). Bananas accounted for about 66 percent of all fresh, canned, and frozen fruit imports in 1996. Fresh bananas are sold year round in the U.S. market, and Americans consume more bananas than any other fresh fruit. Excluding bananas, Chile provided about 23 percent of quantity of imported fruit in 1996. Other major sources include Mexico—13 percent, Costa Rica—8 percent, Thailand—7 percent, and Canada—7 percent.

Latin America provides the majority of fresh and frozen fruit products because these countries can take advantage of their proximity to the United States to ship fruit at lower cost and still maintain quality. Southeast Asian countries provide the largest share of canned fruit products, and Brazil is the largest source of juice imports, followed by Argentina, Mexico, Germany, and Chile. Brazil and Mexico supply citrus juice, Argentina is the leading source for apple and grape juice, and Germany and Chile supply apple juice. The Philippines and Thailand are the major suppliers of pineapple juice, providing the bulk of pineapple juice consumed in the U.S. market. The Philippines, Brazil, India, and Mexico are the major suppliers of tropical nut products such as

Figure A-3

### **Source of U.S. Fruit Imports, 1996**



coconut meat, Brazil nuts, and cashews. Mexico also is a source for pecans.

Until 1996, juice (including wine) has been the major U.S. fruit import (in fresh-weight equivalent). In 1996, imports fell, accounting for 21 percent of the juice consumed, down from 35 percent in 1990. Fresh fruit imports are now the largest category. About 10 billion pounds of fresh fruit was imported in 1996, 3 billion pounds excluding bananas. The non-banana imports are mostly winter noncitrus fruit from Chile and tropical fruit from Mexico and Costa Rica. Chilean imports during the winter in the U.S. provide grapes and stonefruit (peaches, plums, nectarines) that largely complement—rather than compete with—the U.S. noncitrus industries. At the same time, grape and stonefruit imports from Chile compete with domestically produced citrus which once dominated the winter fresh fruit market. Imports of Mexican and Costa Rican tropical fruit help provide fruit that cannot be produced in sufficient quantities domestically to meet expanding consumer demand.

### **Imports Increasingly Important in Fruit Consumption, Except Juice**

Imports of fresh fruit rose from 34.7 percent of fresh domestic consumption in 1990 to 38.3 percent in 1996 (fig. 4-A). Excluding bananas, imports rose from 11.6 percent to 14.9 percent during this time. Canned imports have increased 25 percent to 27.8 percent of canned fruit consumption. Frozen and dried fruit imports have also increased; only juice imports as a portion of consumption have declined.

Chilean imports of winter fresh fruit into the United States began in the mid-1980s. Since 1985, Chilean imports have increased 85 percent. Grapes make up the largest portion of Chilean winter fruit entering the United States. Grape imports rose from 32 percent in 1985 to 40 percent in 1996. About 67 percent of grape imports arrive during November through March. In 1975, only 8 percent of the grapes consumed domestically were imported. From March through May, grapes in the U.S. market are mostly from Mexico, providing a continuous supply until southern California grapes are harvested. Other fruit coming from Chile include peaches, plums, pears, and avocados.

Tropical fruit have been growing in popularity in the United States during the nineties. Production of tropical fruit domestically is limited to parts of southern Florida, southern California, and Hawaii. Hawaii's production has declined over the years as diseases have limited its production of pineapples and papayas. The presence of the Mediterranean fruit fly in Hawaii prevents banana shipments elsewhere in the United States. In Florida, Hurricane Andrew in 1992 damaged mango, lime, and avocado trees, drastically reducing domestic supplies. California produces most of the domestic avocado crop and is able to supply the market year round. Mexico has become the major supplier of many trop-

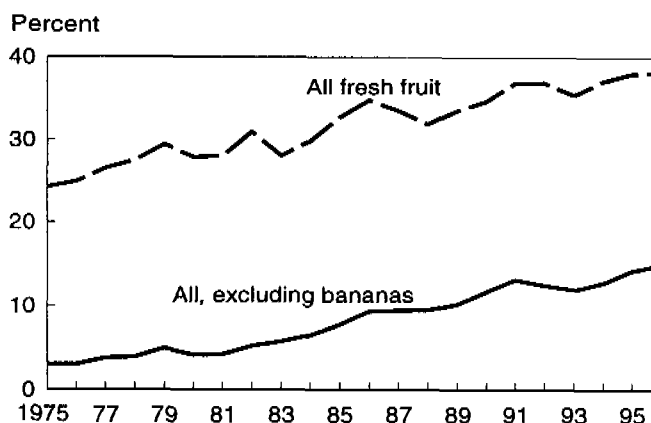
ical fruit. Almost all the mangos, papayas, and limes consumed in the United States come from Mexico. Fresh pineapples are mostly imported from Costa Rica, with lesser quantities shipped from Honduras and Mexico. Chile is presently the major source of imported avocados, entering the U.S. market from November through March. Beginning this November, Mexican avocados will be imported during the winter months into Northeastern and Midwestern States, providing an additional source of avocados.

Canned pineapples made up 26 percent of domestic canned fruit consumption in 1996, but accounted for 82 percent of canned fruit imports. Canned pineapple imports grew 12 percent between 1990 and 1996, however, they have grown 43 percent since 1980 due to declining output from Hawaii. While Latin America provides most of fresh pineapple supplies for the U.S. market, Southeast Asia provides most of the processed pineapple products. The Philippines, Thailand, and Indonesia are the major suppliers of canned pineapples.

Dried fruit accounts for only a small portion of domestic fruit consumption, and imports constitute only a small portion of dried fruit in the U.S. market. Raisins comprise the largest category among dried fruit, and most raisins come from California grapes. Dried apricots are dependent on imports, mostly from Turkey.

Imports accounted for only about 10 percent of frozen fruit consumption in 1996. Frozen fruit is only a small portion of domestic fruit consumption, and imports often fluctuate to supplement domestic supplies following small crops. During low production years, more fruit is likely to go to the fresh market where growers can receive higher prices and less will be sent to processing. Imports help supplement stocks the following year to maintain steady supply. Strawberries are the largest category of frozen fruit, accounting for about 30 percent of frozen fruit consumption in 1996. Frozen strawberry imports have declined from a high in the late

Figure A-4  
**U.S. Fresh Fruit: Import Share of Domestic Consumption\***



\*Includes blueberries starting in 1992, raspberries in 1994 and kiwifruit in 1985.

1970s, when 37 percent of consumption was imported, to an average of 17 percent since 1994. Most frozen strawberry imports come from Mexico. Frozen raspberry imports rose from less than 10 percent of consumption in the late seventies and early eighties and peaked around 1986-87. In 1994/95, frozen raspberry imports have averaged about 19 percent of consumption. Imports rose again in 1996 to supplement domestic supplies that were only about two-thirds the size of the previous year's.

Juice constitutes the only fruit category where imports are showing a declining importance in domestic consumption. Because juice consumption is an important component of total fruit consumption, the decline in overall juice imports is the major factor leading to lower total fruit import as a proportion of consumption in 1996. Certain juices, such as pineapple, depend on imports to meet domestic needs, because the United States does not produce enough of the fruit to meet consumer demand. Most other juice imports,

Table A-1--Fruit and vegetable imports as a percent of consumption, 1996 1/

Item	Imports	Consump- tion	Imports as a percent of consumption
	Mil lbs	Mil lbs	Percent
<b>Vegetables:</b>			
Fresh vegeys & melons 2/	5,542	40,841	13.6
Fresh, excl potatoes	4,219	32,790	12.9
Melons	1,323	8,051	16.4
Potatoes, all	1,928	37,951	5.1
Fresh-market	987	12,958	7.6
Processing	941	24,993	3.8
Canned 3/	1,182	28,026	4.2
Frozen 3/	1,051	6,254	16.8
Sweet potatoes	76	1,233	6.2
Dry beans	87	2,000	4.4
Dry peas & lentils	50	135	37.2
Mushrooms, all	291	1,059	27.5
All vegetables	10,206	117,499	8.7
<b>Fruits:</b>			
Fresh, all	10,391	27,105	38.3
Excluding bananas	2,925	19,625	14.9
Frozen	111	1,140	9.7
Canned 4/	1,382	4,884	28.3
Dried	349	1,161	30.1
Juice	10,034	46,962	21.4
Tree nuts	204	512	39.8
All fruits & nuts	22,472	81,764	27.5
<b>Fruit &amp; vegetables</b>			
Fresh, incl fresh potatoes	16,920	80,904	20.9
Excluding bananas	9,454	73,424	12.9
Frozen	2,070	23,282	8.9
Canned	2,566	33,477	7.7
Other 5/	11,122	61,600	18.1
All fruits & veg	32,678	199,263	16.4

1/ All data are expressed in terms of fresh weight. 2/ Excludes fresh potatoes. 3/ Includes pineapple. 4/ Includes sweetpotatoes, dry beans, dry peas, mushrooms, fruit juice, dried fruits, tree nuts, dehydrated potatoes, and potato chips.

Source: Economic Research Service, USDA.

however, supplement domestic stocks, both in response to reduced crop production and as domestic consumption of these juices have increased. Declining juice imports the last few years is due mostly to lower orange juice imports. Periodically over the years, orange juice imports, mostly from Brazil, with lesser amounts from Mexico and Belize, have helped alleviate production shortfalls resulting from crop losses from freeze damage. In response to two consecutive freezes in the late eighties, Florida growers, who produce 95 percent of the U.S. orange juice supply, planted new, higher yielding groves in the southern part of the State. Now that these plantings are commercially productive, Florida is producing record-sized crops and therefore record quantities of orange juice. The need for imported orange juice has diminished since Florida is now able to meet most of domestic orange juice demand. Florida will still import from Brazil during the early months of its season to blend with its orange juice, but is unlikely to import as much as in the past, keeping juice imports around present levels.

Table A-2--Fruit and vegetable imports as a percent of consumption, 1990 1/

Item	Imports	Consump- tion	Imports as a percent of consumption
	Mil lbs	Mil lbs	Percent
<b>Vegetables:</b>			
Fresh vegeys & melons 2/	3,265	34,577	9.4
Fresh, excl potatoes	2,391	28,432	8.4
Melons	874	6,145	14.2
Potatoes, all	992	31,902	3.1
Fresh-market	684	11,434	6.0
Processing	308	20,468	1.5
Canned 3/	1,719	26,779	6.4
Frozen 3/	719	5,083	14.1
Sweet potatoes	59	1,140	5.2
Dry beans	87	1,656	5.3
Dry peas & lentils	29	124	23.7
Mushrooms, all	209	930	22.4
All vegetables	7,079	102,190	6.9
<b>Fruits:</b>			
Fresh, all	8,079	23,279	34.7
Excluding bananas	2,001	17,190	11.6
Frozen	92	1,212	7.6
Canned 4/	1,174	5,162	22.7
Dried	314	1,189	26.4
Juice	13,533	38,615	35.0
Tree nuts	170	555	30.6
All fruits & nuts	23,362	70,011	33.4
<b>Fruit &amp; vegetables</b>			
Fresh, incl fresh potatoes	12,028	69,290	17.4
Excluding bananas	5,950	63,201	9.4
Frozen, incl potatoes	1,087	18,848	5.8
Canned, incl potatoes	2,895	32,405	8.9
Other 5/	14,430	51,659	27.9
All fruits & veg	30,440	172,201	17.7

1/ All data are expressed in terms of fresh weight. 2/ Excludes fresh potatoes. 3/ Excludes potatoes. 4/ Includes pineapple. 5/ Includes sweet potatoes, dry beans, dry peas, mushrooms, fruit, dried fruits, tree nuts, dehydrated potatoes, and potato chips.

Source: Economic Research Service, USDA.